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PTO/SB/64 (11-03)

Approved for use through 07/31/2006, OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED
UNINTENTIONALLY UNDER 37 CFR 1.137(b)**

Docket Number (Optional)

F98ED0762

First named inventor: **Hiroki NAKAMURA**

Application No.: **09/625,178**

Art Unit: **2814**

Filed: **July 25, 2000**

Examiner: **MAI, ANH D**

Title: **SEMICONDUCTOR DEVICE HAVING WIRING PATTERNS
AND DUMMY PATTERNS COVERED WITH INSULATING LAYER**

Attention: Office of Petitions

Mail Stop Petition

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

FAX: (703) 872-9306

NOTE: If information or assistance is needed in completing this form, please contact Petitions
Information at (703) 305-9282.

The above-identified application became abandoned for failure to file a timely and proper reply to a
notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the
expiration date of the period set for reply in the Office notice or action plus an extensions of time
actually obtained.

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION

NOTE: A grantable petition requires the following items:

- (1) Petition fee;
- (2) Reply and/or issue fee;
- (3) Terminal disclaimer with disclaimer fee --required for all utility and plant applications
filed before June 8, 1995; and for all design applications; and
- (4) Statement that the entire delay was unintentional.

1. Petition fee

☐ Small entity-fee \$ _____ (37 CFR 1.17(m)). Applicant claims small entity status. See 37 CFR 1.27.

☒ Other than small entity - fee \$ 1,330 (37 CFR 1.17(m))

2. Reply and/or fee

A. The reply and/or fee to the above-noted Office action in

the form of Amendment (identify type of reply):

☐ has been filed previously on _____.

☒ is enclosed herewith.

02/24/2004 JADD01 00000054 500945 09625178

B. The issue fee of \$ _____.

☐ has been paid previously on 01 FC:1453 1330.00 DA

☐ is enclosed herewith.

[Page 1 of 2]

This collection of information is required by 37 CFR 1.137. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. Terminal disclaimer with disclaimer fee

- ☐ Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.
- ☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$ _____ for a small entity or \$ _____ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

4. STATEMENT: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. [NOTE. The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D))].

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February 20, 2004

Date _____

Signature

Telephone

Number: (202) 452-6190

Junichi MIMURA

Typed or printed name

1101 14th Street, N.W., Suite 555

Address

Washington, D.C. 20005

Address

Enclosures: ☒ Fee Payment

 Reply

☐ Terminal Disclaimer Form

☐ Additional sheets containing statements establishing unintentional delay

☒ Other: Fee Transmittal

CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(a)]

I hereby certify that this correspondence is being:

- ☐ deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: **Mail Stop Petition**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.
- ☐ transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at (703) 872-9306.

Date _____

Signature

Type or printed name of person signing certificate



PTO/SB/17 (10-03)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT (\$)** 1,330**Complete if Known**

Application Number	09/625, 178
Filing Date	July 25, 2000
First Named Inventor	Hiroki NAKAMURA
Examiner Name	MAI, ANH D
Art Unit	2814
Attorney Docket No.	F98ED0762

METHOD OF PAYMENT (check all that apply)

<input type="checkbox"/> Check	<input type="checkbox"/> Credit Card	<input type="checkbox"/> Money Order	<input type="checkbox"/> Other	<input type="checkbox"/> None
<input checked="" type="checkbox"/> Deposit Account:				
Deposit Account Number	50-0945			
Deposit Account Name	OKI America, Inc.			

The Director is authorized to: (check all that apply)

<input checked="" type="checkbox"/> Charge fee(s) indicated below	<input checked="" type="checkbox"/> Credit any overpayments
<input checked="" type="checkbox"/> Charge any additional fee(s) or any underpayment of fee(s)	
<input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.	

FEE CALCULATION**1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Code	Fee (\$)	Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$)**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Total Claims	Extra Claims	Fee from below	Fee Paid
0	- 20** = 0	x 18 = 0	0
0	- 3** = 0	x 84 = 0	0
0		0 = 0	0

Large Entity		Small Entity		Fee Description	Fee Paid
Code	Fee (\$)	Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	**Reissue independent claims over original patent	
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2) (\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity		Small Entity		Fee Description	Fee Paid
Code	Fee (\$)	Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	1,330
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid **SUBTOTAL (3) (\$)** 1,330**SUBMITTED BY**

Complete (if applicable)

Name (Print/Type)	Junichi MIMURA	Registration No. (Attorney/Agent)	40,351	Telephone	(202) 452-6190
Signature		Date	February 20, 2004		

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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit: 2814
Examiner: MAI, ANH D

In Re PATENT APPLICATION Of:

Applicant : Hiroki NAKAMURA)

Serial No. : 09/625,178)

Filed : July 25, 2000)

For : SEMICONDUCTOR DEVICE HAVING)
WIRING PATTERNS AND DUMMY)
PATTERNS COVERED WITH)
INSULATING LAYER)

Attorney Ref. : F98ED0762)

AMENDMENT

February 20, 2004

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This application is revived by a Petition For Revival Of An Application For
Patent Abandoned Unintentionally Under 37 CFR 1.137(b) filed herewith. Please
amend the above-identified application as follows:

CLAIM AMENDMENT:

Please amend claims 29, add new claims 34-37 and cancelled claims 1-20, 27, 28 and 30-33.

Claims 1-20 (cancelled).

Claim 21-26 (withdrawn).

Claim 27 and 28 (cancelled).

Claim 29 (currently amended): A semiconductor device, comprising:
a semiconductor substrate having a circuit area where an integrated circuit is formed and a peripheral area surrounding the circuit area;
wiring patterns formed on the substrate in the circuit area, the wiring pattern including a pad pattern;
a first dummy pattern which is formed of the same material as the wiring ~~patterns pattern~~, formed in the peripheral area, along an edge of the semiconductor substrate the dummy pattern encompassing the circuit area;
a second dummy pattern, which is formed of the same material as the wiring patterns, and connected to the first dummy pattern formed in the peripheral area, the second dummy pattern encompassing a part of the circuit area;
a second ~~first~~ insulating layer formed over the wiring patterns and the first and second ~~dummy patterns pattern~~, an edge of the first insulating layer being located on the pad pattern, which is adjacent the dummy pattern; and

a ~~first~~ ~~second~~ insulating layer formed above the semiconductor substrate, the ~~first~~ ~~second~~ insulating layer being formed over the wiring patterns and the ~~second insulating layer being formed~~ outside the first and second dummy patterns pattern but not being formed over the first and second dummy patterns pattern.

Claims 30-33 (canceled).

Claim 33 (new): A semiconductor device as claimed in claim 29, wherein the first insulating layer has a moisture absorbable characteristic.

Claim 35 (new): A semiconductor device as claimed in claim 29, wherein the first insulating layer is an SOG layer.

Claim 36 (new): A semiconductor device as claimed in claim 29, wherein the first dummy pattern has a width, which is fixed by a concentration of solid content of the insulating layer.

Claim 37 (new): A semiconductor device as claimed in claim 29, further comprising a third insulating layer formed on the substrate, the first insulating layer being located between the second insulating layer and the third insulating layer.

REMARKS

This application is revived by a Petition For Revival Of An Application For Patent Abandoned Unintentionally Under 37 CFR 1.137(b) filed herewith, and the Examiner's Office Action May 12, 2003 has been received and carefully reviewed. Claim 29 has been amended, claims 21-26 have been withdrawn from consideration, claims 1-20, 27, 28 and 30-33 have been cancelled, and claim 34-37 have been added. Therefore, claims 29 and 34-37 are pending in this application. For at least the following reasons, it is respectfully submitted that this application is in condition for allowance.

In the Action, Claims 16-20, 29 and 31-33 are rejected under 35 U.S.C. 112, second paragraph as failing to set forth the subject matter which Applicant regards as his invention. Claims 16-20, and 31-33 have been cancelled. Thus, the rejection under 35 U.S.C. 112, second paragraph applied to these claims should be withdrawn.

As to claim 29, the examiner asserts that a peripheral area surrounding the circuit area; wiring patterns formed on the substrate in the circuit area, the wiring pattern including a pad pattern", and further asserts that however, the pad pattern is formed between the dummy patterns 600a and 600b. Therefore, the pad pattern is formed within the peripheral area. Thus, claim 29 is contradicting itself indefinite. Applicant disagrees with the following reasons.

Claim 29 is drafted mainly to cover the third embodiment, which is illustrated in Fig. 7A and 7B. First, according to Fig. 7B and the specification on page 14, lines 15-16, it is clearly disclosed that a bonding pad 601 is formed in a circuit area. Second, it is not necessary to interpret that a circuit area is a single

area. The examiner asserts that the term "peripheral" means "outer part". However, it shall not be interpreted so restrictively. The term "peripheral area" means an area on the periphery of circuit area, which includes "outer part". Thus, the circuit area could be divided into some by a peripheral area, and it is actually done in the third embodiment. In the third embodiment, the bonding pad 601 is formed in the circuit area, and the first and fourth dummy patterns 600b, 600a are formed in the peripheral area. Thus, the circuit area is divided by the pattern 600a. Thus, there is no inconsistency between claims and disclosure of the invention. In addition, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed.Cir.1996). Further, [A] patentee is free to be his own lexicographer. *Markman v. Westview Instruments, Inc.* 53 F.3d 967,980 (Fed.Cir.1995). Moreover, if intrinsic evidence clearly shows the meaning of the term, and if the meaning disclosed in the specification is in conflict with the extrinsic evidence, then, an inconsistent dictionary definition must be rejected. *Texas Digital Systems, Inc. v. Telegenix, Inc.* 308 F.3d 1193, 1204

Nevertheless, in order to make the claim limitation clear, claim 29 is amended to change a dummy pattern to a first dummy pattern, which corresponds to a dummy pattern 600b, and to add new limitation "a second dummy pattern", which corresponds to a dummy pattern 600a.

Applicant believes that the rejection to claim 29 under 35 U.S.C. 112, second paragraph is dissolved by above-mentioned explanation and by amending claim 29, and thus, the rejection to claim 29 is no longer applicable.

In the Action, claims 1-3, 27-33 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 27-41 of copending Application No. 10/128, 244. Since claims 1-3, 27, 28 and 30-33 have been cancelled, and as to claim 29, terminal disclaimer has been filed on September 8, 2003, obviousness-type double patenting is no longer applicable.

In the Action, claims 1-4, 11-15, 27, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaha et al. in view of Hosoda et al. Since claims 1-4, 11-15, 27, 28 and 30 have been cancelled, the rejection under 35 U.S.C. 103(a) applied to these claims should be withdrawn.

As to Product by process limitation, the issue is whether the limitation "width is determined by the concentration of solid content of the SOG layer" is a process limitation or not. Newly added claim 32 has a limitation, which is similar to cancelled claims 3, 9, 14 and 19. Applicant understands this is not a process limitation because this limitation simply indicates a functional linkage between the width and the concentration of solid content of the SOG layer. Anyway, since claim 32 having such a limitation described above is a dependent claim, which depend from allowable independent claim 29, claim 32 is patentable.

In the Action, claims 5, 6, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaha et al., Hosoda et al., and further in view of

Domae et al. Since claims 5, 6, and 8-10 have been cancelled, the rejection under 35 U.S.C. 103(a) applied to these claims should be withdrawn.

It is noted that this Amendment has been prepared using the requested new format. If there are any irregularities in this format, it would be greatly appreciated if Applicant's Counsel would be so advised

In view of the foregoing, the application is deemed to be in condition for allowance and such is earnestly solicited. Should any fee be needed, please charge it to our Account No. 50-0945 and notify us accordingly.

Examination of the application is respectfully requested.

Respectfully submitted,



Junichi MIMURA
(Registration No.40,351)
Oki America, Inc.
1101 14th Street, N.W., Suite 555
Washington, D.C. 20005
Telephone: (202) 452-6190
Telefax: (202) 452-6148
Customer No.: 26071

Date : February 20, 2004